

**CLAIMS**

What is claimed is:

- 5 1. A system for software diagnosis, which diagnoses an un-debugged software having a plurality of program segments related to at least one event, comprising:
- 10 an event ratio-calculating module, which is used to calculate a production weight of the event based on the ratios of the program segments in the un-debugged software and the relation of the program segments with the event; and
- an event-generating module, which is used to generate the event based on the production weight for diagnosing the un-debugged software.
- 15 2. A system for software diagnosis of claim 1, wherein the ratios of the program segments in the software are automatically determined and generated by the event ratio-calculating module.
- 20 3. A system for software diagnosis of claim 1, wherein the ratios of the program segments in the software are determined and input by a user.
- 25 4. A system for software diagnosis of claim 1, wherein the event ratio further considers the ratio of the event in the related program segments while calculating module calculates the production weight of the event.

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5. A system for software diagnosis of claim 4, wherein the ratio of the event in the related program segments is automatically determined and generated by the event ratio-calculating module.

5 6. A system for software diagnosis of claim 4, wherein the ratio of the event in the related program segments is determined and input by a user.

10 7. A system for software diagnosis of claim 1, wherein the un-debugged software is applied on an operating system simulator.

15 8. A system for software diagnosis of claim 1, wherein the event-generating module randomly selects, based on the production weight of the event, one event from a set of events.

20 9. A system for software diagnosis of claim 1, further comprising:  
a diagnosis result recording module, which generates a diagnosis report based on the diagnosis result of the un-debugged software.

25 10. A method for software diagnosis, which diagnoses an un-debugged software having a plurality of program segments related to at least one event, comprising:

calculating a production weight of the event based on the ratios of the program segments in the un-debugged software and the relation of the program segments with the event; and

11. A method for software diagnosis of claim 10, wherein the ratios of the  
5 program segments in the software are automatically determined and  
generated by an event ratio-calculating module.

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16. A method for software diagnosis of claim 10, wherein the un-debugged software is applied on an operating system simulator.

25 17. A method for software diagnosis of claim 10, wherein the event is randomly selected from a set of events based on the production weight of the event.

- 18.A method for software diagnosis of claim 10, further comprising:  
generating a diagnosis report based on the diagnose result of the  
un-debugged software.